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EXAMINER

PAIK, STEVE S

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 05/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/889,478

Applicant(s)

MONTEITH ET AL.

Examiner

Steven S. Paik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Response to Amendment

1. Receipt is acknowledged of the Preliminary Amendment filed 9 January 2002.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
3. It is noted that this application appears to claim subject matter disclosed in prior Application No. PCT/GB00/00109, filed 17 January 2000. A reference to the prior application must be inserted as the first sentence of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e) or 120. See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. Also, the current status of all nonprovisional parent applications referenced should be included.

Specification

4. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Objections

5. Claim 2 is objected to because of the following informalities: "the or each" in line one is indefinite and vague. It is respectfully suggested to replace it with -- said each --. Appropriate correction is required.

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6. Claim 10 is objected to because of the following informalities: the numeral reference for substrate, “(103)” in line 1 appears to be --(102) -- instead of “(103)”. Appropriate correction is required.

7. Claim 11 is objected to because of the following informalities: The preamble of the claim appears improper. The examiner respectfully suggests amending claim 11 as -- A smart card as claimed in claim 1 further comprising a smart card reader/writer for reading and/or writing data to the smart card including electrical contact means adapted to provide an electrical contact with the smart card in use and interface means adapted to communicate data via first and second contact areas via the electrical contact means. --. Appropriate correction is required.

8. Claims 12 and 13 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in alternative only. The claims fail to distinctively claim the invention. It is unclear what the applicant intends to claim when the claim 12 is not dependent from claim 6. Appropriate correction is required.

9. Claim 16 is objected to because of the following informalities: claims 16 recites a method of using a smart card reader/writer. It is respectfully suggested to separate a method claim from an apparatus claim. Appropriate correction is required.

10. Claim 17 is objected to because of the following informalities: The preamble of the claim appears improper. The examiner respectfully suggests amending claim 17 as -- A smart card as claimed in claim 1 further comprising an adapter forming..... --. Appropriate correction is required.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 17 and 18 recite the limitation "said adaptor card" in line 3. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests replacing it with -- said smart card -- if that is what the applicant intends to claim.

13. Claims 19-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Re claim 19, the examiner respectfully suggests amending claim 19 as -- A smart card as claimed in claim 1 further comprising communication means with an electronic book having..... --. Appropriate correction is required.

Re claim 20, the examiner respectfully suggests amending claim 20 as -- A smart card as claimed in claim 11 further comprising communication means with an electronic book having..... --. Appropriate correction is required.

Re claim 21, the examiner respectfully suggests amending claim 21 as -- A smart card as claimed in claim 11 further comprising communication means with an electronic book having..... --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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15. Claims 1-4, 11, 14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Sekiguchi (US 5,126,548).

Re claims 1 and 2, Sekiguchi discloses a smart card (IC card 10) comprising:

(i) a substrate (IC card 10 in Fig. 4);

(ii) one or more integrated circuit (10 in Fig. 6 shows the IC card 10 involving a CPU with memory 50 and an embedded IC module 20 in Fig. 4) mounted integrally with the substrate;

(iii) interface means including a serial data interface circuit (C1...C8 and col. 2, ll. 37-40)) operable to send and/or receive data as a single bit-width data stream, the interface means being arranged to permit data stored in the integrated circuit (IC module 20) to be accessed via serial data interface circuit (col. 3, ll. 5-12); and

(iv) electrical contact means (A1...A8 and C1...C8 in Fig. 4) provided on the substrate surface and adapted to provide electrical contact with a smart card reader (smart card reader 30 in Fig. 6), the contact means having first and second contact areas (A1...A8 and C1...C8 in Fig. 4), each containing a plurality of contact pads electrically coupled to the serial interface circuit, and each contact area being arranged to be usable independently of the other area, the first and second contact areas (A1...A8 and C1...C8 in Fig. 4) being immediately adjacent and non-overlapping (col. 2, ll. 41-45). Sekiguchi further discloses the IC module 20 is below the contact means (A1...A8 and C1...C8 in Fig. 4).

Re claim 3, Sekiguchi discloses the smart card as recited in rejected claim 1 stated above, where the first (A5-A8 and C5-C8) and second (A1-A4 and C1-C4) contact areas each comprises a respective set of eight separate electrically conductive contact pads, each set being communicatively coupled to the serial data interface circuit (col. 3, ll. 5-35).

Re claim 4, Sekiguchi discloses the smart card as recited in rejected claim 1 stated above, in which the serial data interface operates in conformity with the ISO 7816 standard (col. 1, ll. 11-16 and col. 4, ll. 57-63).

Re claim 11, Sekiguchi discloses the smart card as recited in rejected claim 1 stated above, further comprising a smart card reader/writer (30 in Figs. 5 and 6) for reading and/or writing data to the smart card (col. 2, ll. 46-55) including electrical contact means adapted to provide an electrical contact with the smart card in use and interface means adapted to communicate data via first and second contact areas via the electrical contact means (col. 3, ll. 1-47).

Re claim 14, Sekiguchi discloses the smart card as recited in rejected claim 11 stated above, where said electrical contacts (A1..A8 and C1...C8) means comprises at least sixteen electrical contact pins (see Fig. 4).

Re claim 16, Sekiguchi discloses a method of using a smart card reader/writer (30) comprising the steps of:

- (i) inserting said smart card (10) into said smart card reader/writer (30);
- (ii) checking that PIN accessed by the reader/writer (30) is the same as a PIN stored on the smart card and if so (col. 2, ll. 46-55);
- (iii) reading a key from a first serial data interface of the smart card and using the key to gain access to a second data interface of the smart card (col. 56-65).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. Claims 5-8, 12, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekiguchi (US 5,126,548).

Re claims 5-8, 12, 13 and 15, Sekiguchi discloses all the feature of the claimed features with the exception of specifically showing separate electrically conductive pads forming respective ground connections of the serial data interface circuit.

Although Sekiguchi discloses one of the pads (C5) extending along between the first and second areas in Figure 8, control signals to detect and switch to an appropriate mode, and a plurality of interface means in Figure 6, he does not explicitly how the ground connections are electrically interconnected.

The process of designing an integrated circuit naturally requires many areas to consider such as size, cost, simplicity and time. Thus, one of ordinary skill in the art would design an integrated circuit with a common ground when the circuit is interconnected with a plurality of additional integrated circuits for the purpose of reducing the circuit size, saving manufacturing cost, and design process.

Accordingly, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to connect all ground level of integrated circuits in one node to build the circuit smaller, cheaper, and faster.

18. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekiguchi (US 5,126,548) in view of Nishikawa et al. (US 5,581,065).

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Re claim 9, Sekiguchi discloses all the feature of the claimed features with the exception of specifically showing two contact means located at different ends and on different sides of the smart card.

Nishikawa et al. discloses a two contact means located at different ends on different sides of the smart card (Fig. 19-22 and col. 17, ll. 1-30 and col. 18, ll. 9-30) for the purpose of carrying more than one IC chip module to conveniently carry IC chip module.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the IC chip module carrier (10) having more than one IC chip with contact means located at different ends and on different sides, as taught by Nishikawa et al. into the smart card of Sekiguchi for the purpose of carrying more than one IC chip module conveniently and reliably.

19. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sekiguchi (US 5,126,548) in view of de la Huerga (US 5,852,590).

Re claim 10, Sekiguchi discloses all the feature of the claimed features with the exception of the substrate being incorporated into a three dimensional structure selected from a cylinder, a sphere, and a cone.

De la Huerga discloses a medication container and dispenser (Fig. 3) with a memory strips (60) and electrical contacts (62). As shown in Figure 3, the vial has a three dimensional cylindrical shape with memory, contact pads and necessary integrated circuit to keep the prescription information, medication information, and patient information (col. 1, ll. 7-14). Furthermore, de la Huerga reference allows a patient to take his/her medication on time with a right amount of dosage without carrying extra alarming device and information carrier. The

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vial with processor and memory strips function as a smart card having shapes other than rectangular card shape.

In view of de la Huerga's teaching, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to further employ the three dimensional cylindrical shape medication container and dispenser with a memory strips (60), electrical contacts (62) and a computer processor (120) in addition to the smart card of Sekiguchi due to the fact that more efficient and precise communication can be established between the holder (patient) of the three dimensional cylindrical shape medication container and dispenser and medical professionals for the purposes of conveniently maintaining all the prescription information, medication information, and patient information in a container (vial) very similar to the one used commonly in a pharmacy. Therefore, it only requires a slight modification (col. 4, 7-15). Furthermore, such modification of employing a three dimensional cylindrical shape vial with memory strips, contact pads, and a computer processor to the teachings of Sekiguchi would have been an obvious matter of design variation, well within the ordinary skill in the art, and therefore an obvious expedient.

20. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekiguchi (US 5,126,548) in view of Le Roux (US 5,563,400).

Re claims 17 and 18, Sekiguchi discloses all the feature of the claimed features with the exception of showing an adaptor allowing communication between a smart card and a reader/writer.

Le Roux discloses a multi-application portable card (PCMCIA format card 1; see Figs 1A-1D) that can be plugged into a reader and allowing communication between a token (8)

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comprising a chip (7) and a smart card reader. The portable card provides improved connectivity between various chip cards and a card reader with simplified processing steps (col. 1, ll. 57-62).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate multi-application portable card (PCMCIA 1) of Le Roux into the smart card of Sekiguchi for the purpose of providing a simple connection between various chip cards (8) and a computer reader to enhance portable data communications.

21. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekiguchi (US 5,126,548) in view of Handelman et al. (US 6,298,441).

Re claims 19-21, Sekiguchi discloses an IC chip card comprising additional connection terminals to improve a data transfer rate and fully utilize CPU functions of the card.

However, Sekiguchi is silent about how the IC chip card is applicable to other electronic devices such as a PDA and an electronic book.

Handelman et al. discloses various ways to generate output from a portable information storage such as a smart card (385 in Fig. 12). Fig. 12 shows a display screen (425) arranged to communicate with the smart card (385) and speakers (430) to generate audible output read from the smart card (col. 16, ll. 45-63). Handelman et al. discloses one of many examples of how a portable information storage device is communicating with its reading device.

In view of Handelman et al., it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to use a portable document access unit (410) such as electronic book and audio player shown in Fig. 12 in combination with a smart card of Sekiguchi

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for the purpose of expanding the applicability of a portable information storage device and increasing data transfer rate without causing a massive alteration of the structure of an IC module. Sekiguchi in view of Handelman et al. teaches, discloses, or fairly suggests one of many obvious applications of a smart card with various forms of reading devices. Furthermore, such application of a smart card to the teachings of Handelman et al. would have been an obvious matter of usage variation, well within the ordinary skill in the art, and therefore an obvious expedient.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Inoue (US 4,789,776) discloses an IC module provided with at least one pair of IC chips having inverted operating circuit patterns and mounted back-to-back on the obverse and reverse sides of the substrate.

Sarat (US 6,199,128) discloses a smart card with ISO7816 conforming contact pads.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven S. Paik whose telephone number is 703-308-6190. The examiner can normally be reached on Mon - Fri (5:30am-2:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 703-305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-6893 for regular communications and 703-308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.



Steven S. Paik

Examiner

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ssp

May 17, 2003